

BASIS FOR RECLAMATION COST ESTIMATE  
UMETCO MINERALS CORPORATION  
CALLIHAM MINE, SAN JUAN COUNTY, M/037/023

Page 1 of 2

NOTE: Numbers in brackets refer to Means Site Work Cost Data, 1989 Indexes. One acre = 43,560 SF conversion used.

>Demolish and Dispose of Buildings. [020-604-0500] Building demolition, Small bldgs, or single bldgs, no salvage included, steel, \$0.18/CF. ASSUMED building was 10 ft high, therefore a cost of \$1.80/SF is identical.

>Construct Bulkhead Inside Portal. [12.7-322-1000] Masonry Retaining Walls. ASSUMED a retaining wall is similar to a portal bulkhead. ASSUMED a bulkhead without steel reinforcement would be 75% of the cost of a wall with steel reinforcement. ASSUMED the wall would be 6'8" high with a 4'10" base and 18' in length. This gave a cost of \$61.50/LF.

>Backfill Portal to Bulkhead. [022-208-2200] Backfill, structural dozer or F.E. loader, 75 H.P., 150' haul, sand and gravel, \$1.14/CY. ASSUMED mine opening is 100' x 6.7' x 18'. This gave a volume of 444.4 CY. ASSUMED backfilling in the portal 100' increased the cost by 25% giving an estimate of \$633 which was rounded up.

>Remove Trash and Debris. ASSUMED a worker walking at 0.25 MPH (22ft/min) could visually inspect and collect trash from a strip of land 30 ft wide. This gave a time of approximately 66 minutes to cover one acre. ASSUMED the worker's wage was \$5.50/hr which gave a cost of \$6.60 per acre.

>Fill/Regrade Ponds, Regrade Ore Pads, Regrade Waste Stockpile. Used a rate of \$800/acre based on a \$160/hr owning and operating cost for a D-8 Dozer operating at a production rate of 5 hr/acre. This rate was used in a previous reclamation estimate for Umetco's LaSal and Snowball mines dated July 5, 1989.

>Rip Roads. [022-278-2815] Ripping, Grader rear ripper, 180 H.P., ideal conditions, \$0.67/CY. ASSUMED ripping down four inches (0.3ft) which gave a volume of 484 CY/acre or a cost of \$324/acre.

>Boreholes. Used a rate from a previous Calliham reclamation estimate dated 1/5/88 of \$1000 for 3 boreholes.

>Spread Topsoil. [029-204-1850] Rolling topsoil, tractor drawn roller, \$1.95 per 1000 SF or \$84.94/acre.

>Seedbed Preparation. [025-122-0200] Grade subgrade for base course, roadways, \$0.11/SY or \$532/acre.

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Page 2 of 2

>Revegetate. [029-308-1600] Hydraulic or air seeding, with mulch and fertil., Tractor spreader, \$10.50 per 1000 SF or \$457.38/acre.

>Mobilization. ASSUMED a lump sum of \$2000 for general mobilization of a third party doing the reclamation.

ABBREVIATIONS USED

CF - cubic foot  
CY - cubic yard  
LF - linear foot  
SF - square foot  
SY - square yard